

# Solar Physics and Terrestrial Effects

A Curriculum Guide for Teachers  
Grades 7–12

Roger P. Briggs  
Robert J. Carlisle

Boulder Valley Schools

Barbara B. Poppe, Editor

Space Environment Center  
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# Acknowledgments

*Solar Physics and Terrestrial Effects* is the result of a unique collaboration between the scientists at the Space Environment Center in Boulder, CO, and two high-school physics teachers. During the summers of 1992 and 1993, we had the opportunity to immerse ourselves in the work being done at SEC. By combining the cutting-edge knowledge at SEC with our own experience in the public school classroom, we have produced a package that will give young people a taste of one of the most spectacular and exciting applications of physics.

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Roger Briggs and Bob Carlisle  
High-School Physics Teachers, Boulder Valley Public Schools

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Barbara Poppe  
Educational Outreach Coordinator, Space Environment Center

## To the Teacher

*Solar Physics and Terrestrial Effects* is not a step-by-step guide for teachers that will take away from your already over-crowded curriculum. Rather, it is a resource for you to pick and choose from, so that you may enhance your existing course and provide some state-of-the-art applications of physics. We would be happy to hear your reactions and suggestions! Contact us as follows:

Roger Briggs  
Fairview High School  
1515 Greenbriar, Boulder, CO 80303  
(303) 499-7600  
Internet: rbriggs@bvsd.k12.co.us

Barbara Poppe  
Space Environment Center  
325 Broadway, Boulder, CO 80303  
(303) 497-3992  
Internet: bpoppe@sec.noaa.gov

The guide consists of three main parts: a short textbook, a hands-on activity guide, and resource listings.

- The textbook should provide the necessary background in solar physics for teachers. It could also be used by students, but is written largely at an adult level and therefore may not be easily understood by younger students. Problems for more advanced students are included at the end of each of the four sections and answers to the problems are given at the end of this section.
- The activity section offers ideas for hands-on experiences that can be done in the classroom, using materials that are cheap and easily available. Background information is available in the text for the activities. Any materials that are needed for activities can be obtained from a variety of sources, but can also be obtained from Learning Technologies, Inc., using the order form included at the end of this book.
- The resources and references section contains a wealth of further possibilities for exploring Solar-Terrestrial Physics, including software, telecommunications, books, and supplies. Students who want to pursue research projects may find this to be especially helpful.